

IN THE US PATENT AND TRADEMARK OFFICE

Application Number: Not Yet Assigned
Filing Date: Filed Herewith
5 Applicant: Glenn Solomon et al
Agent's Docket No.: CBL-104/DIV
Application Title: Dual Process Semiconductor
Heterostructures & Methods
Examiner: Not Yet Assigned
10 Art Unit: Not Yet Assigned

Certificate of Mailing by "EXPRESS MAIL"

I hereby certify that I am mailing this correspondence on the date indicated below to Assistant Commissioner for Patents, Box Patent Application, WASHINGTON, DC 20231, using the "Express Mail Post Office to Addressee" service of the United States Postal Service under 37 CFR 1.10.

Bing Li DATE OF MAILING 12/18/2001
SIGNATURE
EXPRESS MAIL LABEL NO: EF 085064295 US
Bing Li
NAME OF PERSON SIGNING

PRELIMINARY AMENDMENT

15 Commissioner of Patents and Trademarks
Washington, DC 20231

Sir:

20 Prior to examination of the above referenced application,
kindly enter the following:

TITLE

Kindly amend the title by removing the words "AND METHODS"
25 so that the title reads "DUAL PROCESS SEMICONDUCTOR
HETEROSTRUCTURES."

[illegible]

5

10

Kindly amend the specification by entering replacement paragraphs from pages 1, 3 and 4 below. The changes made are shown in the accompanying "Marked-up Versions" and are described in the Remarks in the section titled "SPECIFICATION".

REPLACEMENT CLAIM 21

1 21. An epitaxial layer, comprising a metal nitride
2 comprising a metal selected from the group consisting
3 of gallium, aluminum and indium, wherein the epitaxial
4 layer is formed by hydride vapor-phase deposition on a
5 buffer layer and wherein the buffer layer comprises a
6 nitride of an element of groups III or IV of the
7 periodic table formed on a substrate by a technique
8 other than HVPE.

10023910-131801

REPLACEMENT PARAGRAPHS

Page 1, lines 7-13

DUAL PROCESS SEMICONDUCTOR HETEROSTRUCTURES

For

5

Glenn S. Solomon, David J. Miller and Tetsuzo Ueda

CROSS REFERENCE TO A RELATED APPLICATION

10 This application is a division of and claims priority from
commonly assigned co-pending U.S. Patent Application serial
number 09/293,620, filed April 16, 1999 the entire
disclosure of which is incorporated herein by reference.

BACKGROUND OF THE INVENTION

15 Page 1, lines 7-13, MARKED-UP VERSION

DUAL PROCESS SEMICONDUCTOR HETEROSTRUCTURES [& METHODS]

For

20

Glenn S. Solomon, David J. Miller and Tetsuzo Ueda

CROSS REFERENCE TO A RELATED APPLICATION

25 This application is a division of and claims priority from
commonly assigned co-pending U.S. Patent Application serial
number 09/293,620, filed April 16, 1999 the entire
disclosure of which is incorporated herein by reference.

BACKGROUND OF THE INVENTION

REPLACEMENT PARAGRAPHS

Section Bridging Page 3, line 27 to page 4, line 9

SUMMARY OF THE INVENTION

The above delineated disadvantages associated with prior art methods for deposition of AlN/GaN heterostructures are addressed by the present invention, in which a buffer layer (e.g., AlN) and an epitaxial layer (e.g., GaN) are grown using different techniques, as will be described fully hereinbelow.

In view of the above, it is an object of the present invention to provide a semiconductor heterostructure and method of making the same.

Section Bridging Page 3, line 27 to page 4, line 9, MARKED-UP VERSION

SUMMARY OF THE INVENTION

The above delineated disadvantages associated with prior art methods for deposition of AlN/GaN heterostructures are addressed by the present invention, in which a buffer layer (e.g., AlN) and an epitaxial layer (e.g., GaN) are grown using different techniques, as will be described fully hereinbelow.

[SUMMARY OF THE INVENTION]

In view of the above, it is an object of the present invention to provide a semiconductor heterostructure and method of making the same.

REMARKS:

Reasons This Amendment Should be Entered

The Applicants submit that the amendments submitted herein are being made concurrent with the filing of the application. The Applicants respectfully request entry of the amendment to correct minor informalities and to cover material within the scope of the present invention.

Title Amendment

The title has been amended to reflect the scope of claims 21-32.

Claim Amendment

Claim 21 has been amended to recite that the buffer layer is deposited by a technique other than HVPE. This amendment provides a better scope of protection. The applicants submit that support for this amendment can be found in the specification at page 4, lines 14-17. Furthermore, the applicants submit that this amendment does not narrow claim 21 within the meaning of the decision in *Festo Corp. v. Shoketsu Kogyo Kabushiki Co., Ltd.*, 234 F3d 558, 566, 56 U.S.P.Q.2d 1865 (Fed. Cir. 2000).

Specification Amendments

The Applicants have amended page 1 of the specification by changing the title as described above and by inserting a cross-reference to the parent application of which the present application is a divisional. The Applicants have also amended the specification by moving the heading "SUMMARY OF THE INVENTION" upwards by one paragraph to place the last paragraph on page 3 within the SUMMARY. The Applicants submit that it is clear from the face of the paragraph in question that this material always referred to

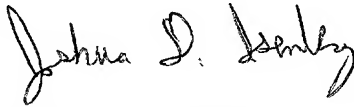
the present invention and not to the background of the related art. The Applicants contend that by this amendment a cosmetic change is being made to avoid the possibility of confusion.

5

CONCLUSION

The applicants believe that all pending claims are allowable for the reasons cited above. Thus, the applicant kindly requests that the Examiner reconsider the application and issue a Notice of Allowance in the next Office Action.

10 Respectfully submitted,



Joshua D. Isenberg
Patent Agent
15 Reg. No. 41,088

Date: 12/18/2001

JDI PATENT
204 Castro Lane
Fremont, CA 94539
20 tel.: 510-896-8328